

## CLAIMS

What is claimed is:

1. A receiver for a digital video service network, the receiver comprising:

means for receiving a digital television signal from a transmission channel, the digital television signal including a Preview Program and Broadcasting Schedule Information, the Preview Program and the Broadcasting Schedule Information relating to a Main Program;

means for decoding the digital television signal;

means for providing an output signal reflective of the Preview Program for display; and

means for downloading the Broadcasting Schedule Information while the Preview Program is being decoded and displayed.

2. The receiver of Claim 1, further including a means for demodulating the received digital television signal and extracting bit streams describing the digital television signal.
3. The receiver of Claim 1, wherein the means for decoding the digital television signal includes a TS demultiplexer for demultiplexing and outputting a signal representative of the Preview Program.
4. The receiver of Claim 3, wherein the TS demultiplexer outputs the Broadcasting Schedule Information.

5. The receiver of Claim 1, further comprising a System and Schedule Manager for controlling the means for decoding, the System Manager further directing a data stream flow of data from the digital television signal.
6. The receiver of Claim 1, further comprising a Digital Storage Device for receiving, storing and replaying data reflective of the Main Program, the Main Program being related to the Preview Program and the Main Program being described by the Broadcasting Schedule Information.
7. The receiver of Claim 1, further comprising Application decoders for decoding audio and video coded bit streams of the Preview Program or the Main Program, the Audio/Video decoders sending an Audio output signal for transducing into sound and a decoded video signal for processing and display.
8. The receiver of Claim 7, further comprising a means for generating an icon to overlay the video output of the decoded video signal during display.
9. The receiver of Claim 3, wherein the Broadcasting Schedule Information includes information describing the Main Program, including a channel number and a start time.
10. The receiver of Claim 9, further comprising a Schedule Queue, the Schedule Queue receiving at least the start time of the Broadcasting Schedule Information, the start time being compared with a system clock to determine when to have control signals sent to instruct the receiver to process the Main Program.
11. The receiver of Claim 10, further comprising a means for notifying a viewer that the start time is approaching and requesting an instruction as to whether the viewer desires that the Main Program be recorded or displayed.

12. The receiver of Claim 11, wherein the means for notifying provides an instruction to record if the viewer does not input any instruction within a predetermined time.

13. A method for providing MPEG-2 digital television signals, the method comprising the steps of:

providing a Preview Program, the Preview Program relating to a Main Program;

providing Broadcasting Schedule Information relating to the Main Program;

coding the Preview Program into an MPEG-2 signal;

embedding the Broadcasting Schedule Information into the MPEG-2 signal such that the Broadcasting Schedule Information will be received by a digital television receiver while the Preview Program is being decoded by the digital television receiver.

14. The method of Claim 13, further comprising the step of coding a notice into the MPEG-2 signal, the notice being applied by the receiver in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the Preview Program and the Broadcasting Schedule Information.

15. The method of Claim 14, wherein the notice is an icon simultaneously displayed with the Preview Program.

16. An MPEG-2 digital television signal, comprising:

a Preview Program coded within the MPEG-2 signal, the Preview Program relating to a Main Program;

Broadcasting Schedule Information embedded within the MPEG-2 signal, the Broadcasting Schedule Information relating to the Main Program;

the Broadcasting Schedule Information being embedded into the MPEG-2 signal such that the Broadcasting Schedule Information will be received by a digital television receiver while the Preview Program is being decoded by the digital television receiver.

17. The MPEG-2 Signal of Claim 16, further comprising a notice coded into the MPEG-2 signal, the notice being applied by the receiver in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the Preview Program and the Broadcasting Schedule Information.

18. The MPEG-2 Signal of Claim 17, wherein the notice is an icon simultaneously displayed with the Preview Program.

19. A method of displaying an MPEG-2 digital television signal, comprising the steps of:

displaying a program coded within an MPEG-2 signal, the Program relating to an related item of choice for the viewer;

receiving ordering information embedded within the MPEG-2 signal simultaneously with the display of the program, the ordering information relating to the item of choice, and the ordering information allowing a viewer to select the item while the program is being displayed.

20. The method of Claim 19, further comprising the step of providing a notice to a viewer, the notice being applied to the viewer in such a manner to inform the viewer that they are receiving an MPEG-2 signal which includes both the program and the ordering information.

- | Parameter                   | Unit | Value | Uncertainty | Parameter                   | Unit | Value | Uncertainty |
|-----------------------------|------|-------|-------------|-----------------------------|------|-------|-------------|
| $\alpha_{\text{H}\beta}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\alpha}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\gamma}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\delta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\epsilon}$ |      | 0.45  | 0.05        | $\alpha_{\text{H}\zeta}$    |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\eta}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\theta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\iota}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\kappa}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\lambda}$  |      | 0.45  | 0.05        | $\alpha_{\text{H}\mu}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\nu}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\xi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\omicron}$ |      | 0.45  | 0.05        | $\alpha_{\text{H}\pi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\rho}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\sigma}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\tau}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\phi}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\chi}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\psi}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\omega}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\delta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\zeta}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\eta}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\eta}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\theta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\theta}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\iota}$    |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\iota}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\kappa}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\kappa}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\lambda}$  |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\lambda}$  |      | 0.45  | 0.05        | $\alpha_{\text{H}\mu}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\mu}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\nu}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\nu}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\xi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\xi}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\omicron}$ |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\omicron}$ |      | 0.45  | 0.05        | $\alpha_{\text{H}\pi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\pi}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\rho}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\rho}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\sigma}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\sigma}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\tau}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\tau}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\phi}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\phi}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\chi}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\chi}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\psi}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\psi}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\omega}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\omega}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\delta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\delta}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\zeta}$    |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\zeta}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\eta}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\eta}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\theta}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\theta}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\iota}$    |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\iota}$    |      | 0.45  | 0.05        | $\alpha_{\text{H}\kappa}$   |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\kappa}$   |      | 0.45  | 0.05        | $\alpha_{\text{H}\lambda}$  |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\lambda}$  |      | 0.45  | 0.05        | $\alpha_{\text{H}\mu}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\mu}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\nu}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\nu}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\xi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\xi}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\omicron}$ |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\omicron}$ |      | 0.45  | 0.05        | $\alpha_{\text{H}\pi}$      |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\pi}$      |      | 0.45  | 0.05        | $\alpha_{\text{H}\rho}$     |      | 0.45  | 0.05        |
| $\alpha_{\text{H}\rho}$     |      | 0.45  | 0.05        | $\alpha_{\text{H}\sigma}$   |      | 0.45  | 0.05        |
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